

ABSTRACT OF THE DISCLOSURE

The radio station comprises several antennas associated with hybrid polarizing couplers. Each polarizing coupler has at least one input connected to radio signal processor comprising at least one receiver and two outputs connected to the antenna which is associated therewith. When said outputs deliver two quadrature radio signals in response to a transmission signal received on one of the two inputs of the polarizing coupler, the antenna which is associated therewith generates two orthogonal electric field components forming a circularly polarized wave. The receiver is arranged so as to combine several input radio signals obtained from respective inputs of the hybrid polarizing couplers and the antennas are placed so as to radiate toward diametrically opposite sectors.

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